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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,699	09/19/2003	Bjorn Bjare	P17466US2	1996
27045	7590	04/23/2007	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024			VERDI, KIMBLEANN C	
			ART UNIT	PAPER NUMBER
			2109	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/666,699

Applicant(s)

BJARE ET AL.

Examiner

Kacy Verdi

Art Unit

2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :September 10, 2004 and April 26, 2004.

DETAILED ACTION

This office action is in response to the Application filed on September 19, 2003. Claims 1-23 are pending in the current application.

Drawings

1. The drawings are objected to because the duplicate steps of 308, "NAC controls application thread", 310, "Message Exists?", and 312, "Get message from queue", in Fig. 7 require a label with the corresponding reference character 308, 310, or 312.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

- a. reference character 314, "Convert Message to Callback Format", Fig. 7 is not disclosed in specification;
- b. reference character 52, "DSP", Fig. 2, is not disclosed in specification.

3. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-9 and 15-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claims 1-9, a “system for transmitting messages between a platform domain and an application domain, the platform domain having a software component and interface component” is being recited; however, it appears that a system for transmitting messages between a platform domain and an application domain, the platform domain having a software component and interface component would reasonably be interpreted by one of ordinary skill in the art as software, per se. A system for transmitting messages between a platform domain and an application domain, the platform domain having a software component and interface component as claimed does not set forth a practical application of the invention and does not make use of memory or computer storage media to produce a tangible result. As such, it is believed that a system for transmitting messages between a platform domain and an application domain, the platform domain having a software component and interface component of claims 1-9 is reasonably interpreted as functional descriptive material, per se.

With respect to claims 15-23, a "mechanism for transmitting messages between a first and second software component" is being recited; however, it appears that a mechanism for transmitting messages between a first and second software component would reasonably be interpreted by one of ordinary skill in the art as software, per se. mechanism for transmitting messages between a first and second software component as claimed does not set forth a practical application of the invention and does not make use of memory or computer storage media to produce a tangible result. As such, it is believed that a mechanism for transmitting messages between a first and second software component of claims 15-23 is reasonably interpreted as functional descriptive material, per se.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 10, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 2003/0037174 A1 to Lavin et al. (hereinafter Lavin) in view of U.S. Patent 6,804,818 B1 to Codella et al. (hereinafter Codella).

3. As to claim 1, Lavin teaches the invention substantially as claimed including a system for transmitting messages between a platform domain (middleware software, paragraph [0011]) and an application domain (application A 108, application B 110,

application C 112, and application D, 114, Fig. 1 are part of the application domain, paragraph [0011]) for a product, the system comprising:

a platform domain having a software component (message broker, 116, Fig. 2) and an interface component (adapter 118, Fig. 2), the interface component having at least one interface (plug 140, Fig. 5) for providing an application or a module in the application domain (application, 108, 110, 112, and 114 Fig. 5) with access to the software component (message broker, 116, Fig. 5), and a message transmitting mechanism (socket 136, Fig. 5, paragraph [0076]) for transmitting messages between the platform domain and the application domain via the interface (socket 136, maps the SDK's 130 interface 132 to the plug's 140 interface defined in socket/plug interface 146, Fig. 5, translation of data performed in socket domain, paragraph [0076]);

Although Lavin teaches the invention substantially, Lavin does not specifically disclose

the message transmitting mechanism including:

a message model for allowing an application or another module in the application domain to select or switch between either a callback mode or a full message mode for receiving messages from the platform domain; and

a message handler for routing messaging according to the selected mode.

However Codella teaches the message transmitting mechanism including:

a message model (Fig. 1) for allowing an application or another module in the application domain (software components, col. 4, line 26 and message-oriented applications, col. 6, lines 55-56) to select or switch between either a callback mode

(asynchronous sends, col. 8, lines 43-44 and col. 15, lines 12-13) or a full message mode (synchronous sends, col. 8, line 42 and col. 15, lines 11-12) for receiving messages from the platform domain (message bean replies to message-oriented application either with synchronous or asynchronous message, col. 8, lines 38-46 (e.g. message-oriented application receives message from message bean)); and

a message handler (message proxy, 104, Fig. 1) for routing messaging according to the selected mode (message proxy 104, creates instance of the result proxy 116, Fig. 1, col. 15, lines 19-20, which identifies type of reply and performs synchronous and asynchronous send for message bean, col. 15, lines 11-16).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the adapter of Lavin with the teachings of a message model and handler from Codella because these features would have provided a unified component model for middleware integration and a mechanism for easy implementation of anonymous invocations (e.g. request for service) (col. 2 lines 6-10 of Codella).

4. As to claim 2, Lavin as modified by Codella teaches the system according to claim 1, wherein the message handler (message proxy, 104, Fig. 1 of Codella) is included in the platform domain (message bean handles request for service (anonymous invocation) between middleware software (e.g. middleware software, paragraph [0011] of Lavin), col. 3, lines 47-53 and col. 4, lines 31-32 of Codella).

5. As to claims 3 and 17, Lavin as modified by Codella teaches the system according to claim 2 and the mechanism according to claim 16, wherein:

the interface (adapter 118, Fig. 2 of Lavin) comprises a middleware services layer (adapter is part of middleware software which connects message broker and application, paragraph [0012], e.g. of Lavin and message bean handles request for service (anonymous invocation) between middleware software (e.g. middleware software, paragraph [0011] of Lavin), col. 3, lines 47-53 and col. 4, lines 31-32 of Codella); and

the message handler (message proxy, 104, Fig. 1 of Codella) comprises a Native Application Core module (message bean is Enterprise Java™ Bean (e.g. message proxy is implemented in Java™), col. 4, lines 28-30 of Codella) that acts as a router (message proxy 104, creates instance of the result proxy 116, Fig. 1, col. 15, lines 19-20, which identifies type of reply and performs synchronous and asynchronous send for message bean, col. 15, lines 11-16) included in the middleware services layer (message bean (message proxy 104, component of message bean, Fig. 1) handles request for service (anonymous invocation) between middleware software (e.g. middleware software, paragraph [0011] of Lavin), col. 3, lines 47-53 and col. 4, lines 31-32 of Codella).

6. As to claims 4 and 18, Lavin as modified by Codella teaches the system according to claim 3 and the mechanism according to claim 17, wherein the Native Application Core module (message bean is Enterprise Java™ Bean (e.g. message proxy is implemented in Java™), col. 4, lines 28-30 of Codella) is included in an Open Platform API (OPA) (e.g. enterprise Java™) domain of the middleware services layer (message bean uses bean-managed messaging which is an EJB (Enterprise Java™

Bean) that uses the JMS application programming interface (API), lines 53-56, JMS provides unified view of commercial messaging systems (e.g. can be used with any message broker system), and any server that supports enterprise Java™, e.g., EJS, can support message bean, col. 20, lines 9-17 of Codella).

7. As to claims 5 and 19, Lavin as modified by Codella teaches the system according to claim 1 and the mechanism according to claim 15, wherein support for the message model is included in the platform domain (message bean (message proxy 104, component of message bean, Fig. 1) handles request for service (anonymous invocation) between middleware software (e.g. middleware software, paragraph [0011] of Lavin), col. 3, lines 47-53 and col. 4, lines 31-32 of Codella) and controlled by the modules in the application domain (receives anonymous invocations from the message-oriented applications (col. 9, lines 4-10 of Codella).

8. As to claim 10, Lavin teaches the invention substantially as claimed including a method of transmitting messages between an application domain (application A 108, application B 110, application C 112, and application D, 114, Fig. 1 are part of the application domain, paragraph [0011]), and a platform domain (middleware software, paragraph [0011]), the platform domain having a software component (message broker, 116, Fig. 2) and an interface component (adapter 118, Fig. 2) having at least one interface (plug 140, Fig. 5) for providing an application or a module in the application domain (application, 108, 110, 112, and 114 Fig. 5) with access to the software component (message broker, 116, Fig. 5).

Although Lavin teaches the invention substantially, Lavin does not specifically disclose the method comprising:

the application or the module in the application domain selecting either a callback mode or a full message mode or switching between the callback mode and the full message mode, the modes being for receiving messages from the platform domain; and

a message handler for routing messaging according to the selected mode.

However Codella teaches the application or the module in the application domain (software components, col. 4, line 26 and message-oriented applications, col. 6, lines 55-56) selecting either a callback mode (asynchronous sends, col. 8, lines 43-44 and col. 15, lines 12-13) or a full message mode (synchronous sends, col. 8, line 42 and col. 15, lines 11-12) or switching between the callback mode and the full message mode, the modes being for receiving messages from the platform domain (message bean replies to message-oriented application either with synchronous or asynchronous message, col. 8, lines 38-46 (e.g. message-oriented application receives message from message bean)); and

a message handler (message proxy, 104, Fig. 1 of Codella) for routing messaging according to the selected mode (message proxy 104, creates instance of the result proxy 116, Fig. 1, col. 15, lines 19-20, which identifies type of reply and performs synchronous and asynchronous send for message bean, col. 15, lines 11-16 of Codella).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the adapter of Lavin with the teachings of a message model and handler from Codella because these features would have provided a unified component model for middleware integration and a mechanism for easy implementation of anonymous invocations (e.g. request for service) (col. 2 lines 6-10 of Codella).

9. As to claim 15, Lavin teaches the invention substantially as claimed including a message transmitting mechanism for transmitting messages between first (application A 108, application B 110, application C 112, and application D, 114, Fig. 1 are part of the application domain, paragraph [0011]) and second software components (message broker, 116, Fig. 2).

Although Lavin teaches the invention substantially, Lavin does not specifically disclose the message transmitting mechanism comprising:

a message model for allowing one of the first and second software components to select either a callback mode or a full message mode or switch between the callback mode and the full message mode, the modes being for receiving messages between the first and second software components; and

a message handler (message proxy, 104, Fig. 1 of Codella) for routing messaging according to the selected mode (message proxy 104, creates instance of the result proxy 116, Fig. 1, col. 15, lines 19-20, which identifies type of reply and performs synchronous and asynchronous send for message bean, col. 15, lines 11-16 of Codella).

However Codella teaches the message transmitting mechanism comprising:
a message model (Fig. 1) for allowing one of the first and second software components (software components, col. 4, line 26 and message-oriented applications, col. 6, lines 55-56) to select either a callback mode or a full message mode or switch between the callback mode (asynchronous sends, col. 8, lines 43-44 and col. 15, lines 12-13) and the full message mode (synchronous sends, col. 8, line 42 and col. 15, lines 11-12) the modes being for receiving messages from the first and second software components (message bean replies to message-oriented application either with synchronous or asynchronous message, col. 8, lines 38-46 (e.g. message-oriented application receives message from message bean)); and

a message handler (message proxy, 104, Fig. 1 of Codella) for routing messaging according to the selected mode (message proxy 104, creates instance of the result proxy 116, Fig. 1, col. 15, lines 19-20, which identifies type of reply and performs synchronous and asynchronous send for message bean, col. 15, lines 11-16 of Codella).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the adapter of Lavin with the teachings of a message model and handler from Codella because these features would have provided a unified component model for middleware integration and a mechanism for easy implementation of anonymous invocations (e.g. request for service) (col. 2 lines 6-10 of Codella).

10. As to claim 16 Lavin as modified by Codella, teaches the mechanism according to claim 15, wherein the second software component (message broker, 116, Fig. 2) is in a platform domain (middleware software, paragraph [0011]) that includes an interface component (adapter 118, Fig. 2) comprising an interface (plug 140, Fig. 5) for providing the first software component (application, 108, 110, 112, and 114 Fig. 5) with access to the second software component (message broker, 116, Fig. 5), and wherein the message handler (message proxy, 104, Fig. 1 of Codella) is included in the interface component (adapter 118, Fig. 2 of Lavin).

11. Claims 6-9, 11-14, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 2003/0037174 A1 to Lavin et al. (hereinafter Lavin) in view of U.S. Patent 6,804,818 B1 to Codella et al. (hereinafter Codella) as applied to claims 1, 10, 15, and 16 above, and further in view of U.S. Patent 7,020,697 B1 to Goodman et al. (hereinafter Goodman).

12. As to claims 6, 11, and 20 Lavin as modified by Codella teaches the invention substantially as claimed including the system according to claim 1, the method according to claim 10, and the mechanism according to claim 15, wherein, if the callback mode is selected (message bean replies to message-oriented application either with synchronous or asynchronous message, col. 8, lines 38-46 (e.g. message-oriented application receives message from message bean) of Codella).

Although Lavin as modified by Codella teaches the invention substantially, Lavin as modified by Codella does not specifically disclose the callback mode (asynchronous)

is entered by the application returning execution control to the message handler after the invocation of a callback function/procedure/method.

However Goodman teaches the callback mode (asynchronous) is entered by the application returning execution control to the message handler after the invocation (e.g. after sending message) of a callback function/procedure/method (asynchronous (through callback routines, col. 85, 16-18) message services allow an application to send a message to another application and continue processing (e.g. control sent back to message handler) before a reply is received, col. 83, lines 36-41, utilizing message passing middleware, col. 85, lines 10-12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the invention of Lavin as modified by Codella with the teachings of asynchronous message passing from Goodman because this feature would have provided the application domain of Lavin with core messaging services which support basic Inter-Process Communication (IPC) via synchronous and asynchronous message services (col. 83, lines 18-26 of Goodman).

13. As to claims 7, 12, and 21 Lavin as modified teaches the system according to claim 1, the method according to claim 10, and the mechanism according to claim 15, wherein if the full message mode (synchronous) is selected (message bean replies to message-oriented application either with synchronous or asynchronous message, col. 8, lines 38-46 (e.g. message-oriented application receives message from message bean) of Codella), the full message mode is entered by the application keeping the execution control after the invocation (e.g. after sending message) of a callback

function/procedure/method (synchronous messaging services allow an application to send a message to another application and wait for a reply before continuing, col. 83, lines 31-33 of Goodman) and polling (e.g. waiting for reply) the message handler for queued messages (application waits for reply, col. 83, lines 31-33 of Goodman, from message proxy, 104, Fig. 1 of Codella).

14. As to claims 8, 13, and 22, Lavin as modified teaches the system according to claim 1, the method according to claim 10, and the mechanism according to claim 15, wherein the application (e.g. message-oriented application) or the module in the application domain may change or switch between the callback mode (asynchronous) and the full message mode (synchronous) at any time (messaging service chosen based on application uses, synchronous messaging is typically used for update and general business transactions and asynchronous messaging is used for larger retrieval type processing, col. 83, lines 25-41 of Goodman)

15. As to claims 9, 14, and 23, Lavin as modified teaches the system according to claim 1, the method according to claim 10, and the mechanism according to claim 16, wherein the platform domain (e.g. middleware software) comprises a platform (virtual resource services 186, Fig. 8) for a mobile terminal (e.g. wireless pager) for a wireless telecommunications system (wireless paging system) (paging services 220, Fig. 8 use applications to provide messaging format and display to network nodes which interface with wireless paging systems, col. 92, lines 14-20 of Goodman).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,449,646 B1 to Sikora et al. discloses an apparatus for routing a transaction message, such as for example a telephone call, e-mail, web chat request, video conferencing session, or non-call event, includes a queue engine and a transaction message router.

U.S. Patent 6,535,929 B1 to Provino et al. discloses communication between application programs which is facilitated by a virtual device driver to which the application programs make function calls.

U.S. Patent 7,047,532 B1 to Connelly discloses a messaging system that isolates application programs from the underlying transport and routing mechanisms that are actually used to convey messages.

U.S. Patent 7,143,186 B2 to Stewart et al. discloses an enterprise wide electronic commerce system which allows trading partners to act as participants in a complex trading process.

U.S. Patent Application Publication to Baker et al. discloses a Web-based call routing management workstation application which allows authorized customers to control toll free routing and monitor call center status.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kacy Verdi whose telephone number is (571) 270-1654. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm EST..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on (571) 272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KV

April 11, 2007


XIAO WU
SUPERVISORY PATENT EXAMINER